

1. LEYD, INC. SHALL NOT HAVE AUTHORITY OVER THE SITE CONTRACTOR'S WORK OR RESPONSIBILITIES. LEYD IS NOT RESPONSIBLE FOR SITE SAFETY PROCEDURES OR METHODS OF CONSTRUCTION. IT IS NOT LEYD'S DUTY TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
2. ALL EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND OTHER UTILITIES MAY EXIST. CONTRACTOR MUST HAVE EXISTING UTILITIES LOCATED BY UNDERGROUND LINE LOCATIONS AS WELL AS FIELD VERIFIED BY ONSITE PERSONNEL BY "POt HOUSING" THE UTILITY WITH POST HOLE DIGGERS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY.
3. EXISTING UTILITIES TO REMAIN MAY BE LOCATED WITHIN PROPOSED DEMOLITION AREAS. CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING IN THESE AREAS TO ENSURE NO UTILITY SERVICE INTERRUPTIONS TO FACILITIES THAT REMAIN OR TO ADJACENT PROPERTIES.
4. ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO REMAIN UNLESS SPECIFICALLY NOTED, "TO BE REMOVED".
5. CONTRACTOR SHALL COORDINATE WITH OWNER AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OR REMOVAL OF ANY UTILITY SERVICE. ALL UTILITIES TO BE REMOVED ARE TO BE CAPPED OR PLUGGED OR TERMINATED ACCORDING TO THE UTILITY OWNERS REQUIREMENTS.
6. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS ON OR OFF SITE DUE TO THE CONSTRUCTION OF THIS PROJECT. ANY DAMAGE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. WHEN CAVES OR SOLUTION CAVITIES ARE DISCOVERED DURING CONSTRUCTION, WORK SHALL STOP IN THE AREA PENDING FURTHER GEOLOGICAL AND GEOTECHNICAL INVESTIGATIONS.
8. IF DURING CONSTRUCTION THE CONTRACTOR OBSERVES HISTORIC OR ARCHEOLOGICAL RESOURCES, THEN SUCH OBSERVATIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL CEASE ALL ACTIVITIES IN THE AREA THAT MAY RESULT IN THE DESTRUCTION OF THESE RESOURCES AND SHALL PREVENT EMPLOYEES FROM TRESPASSING ON, REMOVING, OR OTHERWISE DAMAGING SUCH RESOURCES UNTIL RELEASED BY THE OWNER.
9. MILITARY MUNITIONS – BASED ON THE ENVIRONMENTAL ASSESSMENT THE EUL SITE HAS NOT BEEN IDENTIFIED AS HAVING THE POTENTIAL OF UNEXPLODED ORDNANCE (UXO), IN THE EVENT THAT THE CONTRACTOR DISCOVERS OR UNCOVERS MILITARY MUNITIONS AS DEFINED IN 40 CFR 260, HAZARDOUS WASTE MANAGEMENT SYSTEM HE SHALL STOP WORK IN THAT AREA AND NOTIFY THE OWNER.
10. STORMWATER IMPACTS SHALL BE MINIMIZED DURING CONSTRUCTION WITH APPROPRIATE BMP MEASURES PER THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING A PLAN FOR SECONDARY CONTAINMENT OF STORED FUEL, DRIP PANS UNDER GENERATORS AND STATIONARY VEHICLES, AND MAINTAINING SPILL MITIGATION KITS ON-SITE DURING CONSTRUCTION.
11. WASTE MATERIALS SHALL BE RECYCLED TO THE MAXIMUM EXTENT FEASIBLE.
12. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION. NOTE THAT NOT ALL SECTIONS OF THE CITY SPECIFICATIONS WILL APPLY TO THIS PROJECT.
13. CONCRETE SHALL BE 3,000 PSI 28 DAY STRENGTH UNLESS OTHERWISE NOTED ON THE PLANS.
14. EXISTING ROADWAYS SHALL BE KEPT FREE OF MUD, SEDIMENT, DEBRIS, ETC. AND SHALL BE CLEANED ON A REGULAR BASIS - AS A MINIMUM DAILY.

1. CONTRACTOR TO COORDINATE DEMOLITION ITEMS NOTED ON THE DRAWINGS TO BE SALVAGED, RECYCLED, AND REUSED. CONTRACTOR SHALL REMOVE THE CONCRETE & STEEL, ELECTRICAL POLES AND COPPER 480V LINES (HACHED SOUTH OUT OF SUBSTATION) TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE AND TAKE THEM TO AREA ON REDSTONE ARSENAL NOTED ON THE PLANS. REMOVAL OF THE SUBSTATION, COUNTERPOISE, FENCING ETC. IS A PART OF THE PROJECT SCOPE.
2. REFER TO SITE GRADING, DRAINAGE, AND UTILITY PLANS FOR PROPOSED UTILITY AND DRAINAGE INSTALLATION AND REMOVAL.
3. REFER TO LAYOUT, GRADING, AND UTILITY PLANS FOR ADDITIONAL INFORMATION RELATING TO PAVING, CURB, SIDEWALKS, ETC. REMOVE EXISTING CURBS AS NECESSARY TO INSTALL PROPOSED IMPROVEMENTS.
4. CONTRACTOR SHALL COORDINATE WITH CITY OF HUNTSVILLE (OWNER), REDSTONE ARSENAL, LBVD, THE PROJECT MANAGER, AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OF ANY UTILITY SERVICE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION OR PROTECTION OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT ARE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS UNLESS NOTED TO BE RELOCATED BY THE UTILITY SERVICE PROVIDER.
6. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE RECYCLED TO THE MAXIMUM EXTENT FEASIBLE. REMAINING WASTE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE TRANSPORTED AND DISPOSED OF OFF-SITE AS REQUIRED IN A LEGAL MANNER WHILE KEEPING THE SITE CLEAN AND ORDERLY.
7. ALL EXISTING PAVING, CURBS, HARDSCAPE, ETC. SHALL BE SAW CUT AT THE LIMITS OF REMOVAL IN ORDER TO PROVIDE A CLEAN EDGE, EXISTING PAVING AT EDGE SHALL BE REPAIRED WITH A MINIMUM SLAB OF AT LEAST ONE SMOOTH TRANSITION.
8. ALL EXISTING CURBS AND REMAINDER OUTSIDE OF THE CLEARING LIMITS SHALL BE PROTECTED DURING CONSTRUCTION.
9. BACKFILLING OF DEMOLISHED ITEMS SHALL BE SUITABLE FILL OR STONE PER THE PROJECT SPECIFICATIONS SUPPLEMENTAL SPECIFICATIONS EARTHWORK.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND PUMPING AS NECESSARY FOR EROSION CONTROL FOR OWN SCOPE OF WORK.

1. THE CONTRACTOR SHALL VERIFY SITE BOUNDARY AND EXISTING TOPOGRAPHY. NOTIFY THE OWNER OF ANY DISCREPANCIES PRIOR TO SUBMITTING PRICES OR ORDERING MATERIALS.
2. THE OWNER WILL BE RESPONSIBLE FOR PROVIDING BENCHMARKS, CONTROLS, AND PLAT ELECTRONIC AS-BUILT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL BENCHMARKS, PROPERTY CORNERS, AND ADJUT NOTIFICATION. ANY REPLACEMENT WILL BE AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND A "RED-LINED" SET OF CLEAN CONSTRUCTION DOCUMENTS TO SERVE AS THE CONTRACTOR'S AS-BUILTS FOR OWN SCOPE OF WORK.
5. ALL DIMENSIONS AND COORDINATES SHOWN ARE TO THE BACK OF CURB OR TO THE EDGE OF SURFACING UNLESS OTHERWISE NOTED.
6. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY THE OWNER AND PERFORMED BY BUSINESS ENGINEERING TOPOGRAPHIC SURVEYING IS REFERENCED WAS OBTAINED APRIL 12, 2011, AND AERIAL ORIMAT AND TACSON FROM PREVIOUS DESIGN PLANS FOR PACKAGE 1A DATED DECEMBER 16, 2010, PACKAGE 1B DATED APRIL 12, 2011, PACKAGE 1C DATED JANUARY 17, 2012, AND PACKAGE 1F DATED JANUARY 17, 2012.

1. THE CONTRACTOR SHALL NOTIFY REDSTONE ARSENAL, JERRY ROBINSON (256) 876-3122, AT LEAST 48 HOURS IN ADVANCE OF WORK NEAR REDSTONE TRANSMISSION LINES.
2. A CONDUCTOR TO GROUND CLEARANCE OF 24 FEET MUST BE MAINTAINED ON ALL FILLS. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO REDSTONE PROPERTY AND/OR ELECTRICAL OUTAGES CAUSED BY THEIR WORK.
3. THE CONTRACTOR SHALL TAKE MEASURES TO ENSURE THE SAFETY OF THEIR WORKERS WHEN WORKING IN OR AROUND THE HIGH VOLTAGE TRANSMISSION LINES. THIS WORK SHALL BE PER STATE LAWS AND OSHA REQUIREMENTS FOR WORK NEAR ENERGIZED TRANSMISSION LINES.
4. ANY COUNTERPOSE THAT IS UNCOVERED OR DAMAGED SHALL BE REPAIRED/REBURIED IMMEDIATELY BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
5. REDSTONE HAS THE RIGHT FOR INGRESS AND EGRESS THROUGH THE CONSTRUCTION SITE FOR MAINTENANCE ON THEIR LINES. THE CONTRACTOR SHALL WORK WITH REDSTONE TO ENSURE ACCESS TO THEIR FACILITIES.

1. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST EDITION AND REVISION OF PART VI OF THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE APPROVED TRAFFIC CONTROL PLAN FOR ALL CONSTRUCTION WITHIN WORK AREAS SHOWN AND DESCRIBED IN PART VI OF THE MUTCD.
2. ACCESS TO THE VISITOR'S CENTER SHALL BE MAINTAINED AT ALL TIMES AND SHALL MEET THE REQUIREMENTS OF REDSTONE ARSENAL.
3. TRAFFIC CONTROL AND ACCESS SHALL TAKE INTO CONSIDERATION BASE SECURITY MEASURES.
4. PERMANENT ROADWAY SIGNS OR TEMPORARY CONSTRUCTION SIGNS WHICH ARE NOT APPLICABLE OR INAPPROPRIATE FOR THE CURRENT CONDITIONS SHALL BE COVERED OR REMOVED.
5. THE DIMENSIONS SHOWN OR DESCRIBED FOR LOCATING CONSTRUCTION SIGNS ARE NOMINAL. THE ACTUAL DIMENSIONS SHALL BE ADJUSTED TO BEST FIT LOCAL CONDITIONS AND PROVIDE MAXIMUM VISIBILITY.
6. TRAFFIC CONTROL DEVICES ARE NECESSARY FOR PROPER WARNING AND TRAFFIC CONTROL AFTER SUNDOWN, THEN AS A MINIMUM THE FOLLOWING WARNING LIGHTS SHALL BE PLACED ON THE FIRST WARNING SIGN AND CHANNELIZING DRUM AND TYPE "A" REFLECTIVE SHEETING SHALL BE REQUIRED ON ALL SIGNS.
7. HAZARDOUS CONDITIONS ON OPEN ROADWAYS SUCH AS PAVEMENT DROP-OFFS IN EXCESS OF 2" CONSTRUCTION MATERIALS, VEHICLES, OR EQUIPMENT STORED OR PLACED WITHIN THE ROADWAY RIGHT-OF-WAY, AND OPEN TRENCHES ACROSS OR NEAR THE ROADWAY SHALL NOT BE ALLOWED UNLESS THE CONTRACTOR IS ON SITE AND WORKING, AND PROPER TRAFFIC CONTROL MEASURES ARE BEING TAKEN INCLUDING BARRICADES.
8. THE CONTRACTOR SHALL KEEP OPEN ROADWAYS CLEAN AND FREE OF CONSTRUCTION DEBRIS, DIRT, LOOSE GRAVEL, OR OTHER MATERIAL THAT MAY CAUSE HAZARDOUS DRIVING CONDITIONS.
9. TRAFFIC CONTROL DEVICES SHALL MEET THE STANDARD MATERIAL AND INSTALLATION REQUIREMENTS SPECIFIED IN THE CURRENT EDITION OF THE A.L.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
10. ROADWAYS AND DRIVEWAYS SHALL REMAIN OPEN DURING CONSTRUCTION.
11. CHANNELIZING DEVICES SHALL BE PLACED AT 10' ON CENTER LONGER THAN MINIMUM 20' RADII TO CHANNELIZE TRAFFIC INTO AND OUT OF INTERSECTING ROAD AND DRIVES WITHIN AREAS WHERE CHANNELIZING DEVICES ARE REQUIRED. TEMPORARY REGULATORY SIGNS SUCH AS STOP SIGNS AND YIELD SIGNS SHALL BE PLACED AS NECESSARY FOR PROPER TRAFFIC CONTROL IN ACCORDANCE WITH THE MUTCD.
12. CONTRACTOR SHALL UTILIZE FLAGMEN AND SIGNAGE AS NEEDED TO ASSURE SAFE ACCESS TO AND FROM THE VISITOR'S CENTER.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SITE CONSTRUCTION TRAFFIC CONTROL PLAN TO BE APPROVED BY THE CITY OF CHATTILLVILLE AND REDSTONE ARSENAL PRIOR TO CONSTRUCTION. THE SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL TAKE INTO ACCOUNT THE ENTERING AND EXITING OF CONSTRUCTION TRAFFIC ONTO THE ROADWAY AND THE IMPACT TO THE FLOW OF TRAFFIC. THIS PLAN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. THIS SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE IN ADDITION TO ANY TRAFFIC LOGISTICS PLANS PROVIDED IN THIS PLAN SET FOR ROADWAY IMPROVEMENTS.
13. CONTRACTOR SHALL PHASE TRAFFIC CONTROL PLAN AS NEEDED TO ALLOW CONTINUOUS ACCESS TO THE EXISTING VISITOR CENTER AND RAILROAD SPUR ALONG WITH THE PACKAGE 1E, 1F, 1H AND BUILDING RGT200 CONTRACTORS AS NEEDED TO PROTECT THE WORKERS AND TRAVELING PUBLIC.
14. EXISTING ROADWAYS SHALL BE KEPT FREE OF MUD, SEDIMENT, DEBRIS, ETC. AND SHALL BE CLEANED ON A REGULAR BASIS - AS A MINIMUM DAILY.

THE OWNER WILL BE RESPONSIBLE FOR PROVIDING ITS COMPACTATION TESTING. ADDITIONAL COMPACTATION TESTING MAYBE REQUIRED AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. ALL TOPSOIL SHALL BE STRIPPED WITHIN THE PROPOSED LIMITS OF GRADING AND SHALL BE STOCKPILED ON THE REDSTONE GATEWAY IN AN APPROVED LOCATION FOR LATER USE DURING THIS PACKAGE TO RE-PLATE AREAS AS INDICATED ON THE PLANS. ALL EXCESS TOPSOIL SHALL BE HAULED OFFSITE. SEE SPECIFICATIONS FOR OFFSITE DISPOSAL AREA LOCATION.

3. SUBGRADE IN FILL AREAS SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK AND APPROVED BY THE GEOTECHNICAL ENGINEER. ALL EXISTING SOILS OF PLAINING, RUTTING, OR ANY UNSUITABLE (ORGANIC, SOFT, WET, LOOSE) MATERIAL FOUND IN PLACE SHALL BE UNDERCUT AND REPLACED, OR MOISTURE CONDITIONED AND COMPACTED TO THE SPECIFIED DENSITY AND MOISTURE CONTENT LISTED BELOW.

4. ALL EXPOSED SUBGRADE IN CUT AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12" AND RECOMPACTED TO THE SPECIFIED DENSITY AND MOISTURE CONTENT LISTED BELOW AND IN THE PROJECT SPECIFICATIONS.

5. THE PROJECT IS UNCLASSIFIED TO 12" BELOW SUBGRADE ELEVATION IN CUT AREAS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE SUBGRADE AFTER IT HAS BEEN INITIALLY PREPARED, IF DAMAGED DUE TO INCLEMENT WEATHER OR CONSTRUCTION TRAFFIC.

7. FILL MATERIAL SHALL HAVE THE FOLLOWING PROPERTIES: VIRTUALLY FREE OF ORGANICS LESS THAN 5%, NO ROCK FRAGMENTS GREATER THAN 4" WITHIN 4" OF FINISH GRADE, LIMIT SOILS NOT EXCEEDING 50%, PLASTICITY INDEX NOT EXCEEDING 30, MINIMUM STANDARD PROCTOR (ASTM D-698) OF 100 PCP, COMPACTED TO 98% IN PAVED AREAS, PLACED IN 18" TO 24" THICK LOOSE LAYS, AND IN 12" TO 22.0% OF OPTIMUM MOISTURE CONTENT. NOTE THAT SOILS WITHIN 1" OF PAVED AREAS SHALL BE 6% SOILS AND HAVE A MAXIMUM OPTIMUM LIMIT NOT EXCEEDING 50, AND A MAXIMUM PLASTICITY INDEX NOT EXCEEDING 30, COMPACTED TO 98% AND WITHIN 2.0% OF OPTIMUM MOISTURE CONTENT. REFER TO SUPPLEMENTAL SPECIFICATIONS EARTHWORK FOR ADDITIONAL INFORMATION.

8. COMPACTION TESTS WILL BE TAKEN AT THE RECOMMENDATION OF THE ON-SITE GEOTECHNICAL ENGINEER, BUT AT A MINIMUM EVERY 5,000 SQUARE FEET OF AREA PER 8' LIFT IN PAVING AREAS.

9. COMPACTION WITHIN LIMITED SPACES (E.G. MANHOLES, INLETS, UTILITY TRENCHES) SHOULD BE BACKFILLED AND COMPACTED SYSTEMATICALLY, AT THE DIRECTION OF THE OWNER'S ONSCITE REPRESENTATIVE. STONE BACKFILL SHALL BE INSTALLED IN 8" LOOSE LAYS AND COMPACTED TO 95% STANDARD PROCTOR PER CY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 105 AND 107 AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS.

10. CLEARING LIMITS SHALL BE 5' OUTSIDE OF ALL PROPOSED GRADED AREAS OR NOT BEYOND THE PROPERTY LINES OR CLEARING LIMITS WHICHEVER IS LESS.

11. NO GRADING-OFF SITE OR AT LEND DENIED ACCESS RIGHT-OF-WAY WITHOUT PROPER APPROVALS AND PRIOR NOTIFICATION.

12. COORDINATE THE SEQUENCING OF ALL GRADING OPERATIONS WITH THE EROSION CONTROL PLAN AND ALL OTHER ONGOING PROJECTS.

13. PROPOSED GRADES INDICATED ON THIS PLAN ARE TO FINISH GRADE. THE CONTRACTOR SHALL MAKE SUBGRADE ADJUSTMENTS FOR TOPSOIL, SIDEWALKS, ETC.


14. FILL SLOPES SHOULD BE BENCHED INTO THE EXISTING SLOPES AND SHOULD BE COORDINATED WITH THE OWNER FOR DEPTH OF BENCH INTO THE SLOPE.

15. THE FOLLOWING GEOTECHNICAL REPORTS HAVE BEEN PREPARED BY BUILDING AND EARTH SCIENCES, INC. AND ARE AVAILABLE TO THE USER: GEOTECHNICAL PROJECT NUMBER HY1019 DATED MARCH 13, 2012 FOR THE POND LINER, PROJECT NUMBER HY1019 DATED SEPTEMBER 22, 2010 FOR THE PAVE 1A AREA, AND PROJECT NUMBER HY1019 DATED AUGUST 5, 2011 FOR PACKAGE #6.

16. UNSUITABLE MATERIAL REFERS TO MATERIAL THAT IS NOT SUITABLE FOR PAVEMENT SUPPORT FOR REASONS ASSOCIATED WITH MATERIAL PROPERTIES, SUCH AS HIGHLY PLASTIC SOILS, "FAT" CLAYS, ORGANICS EXCEEDING 5%, AND OLD FILL. MATERIAL WHICH IS OTHERWISE SUITABLE, BUT ABOVE THE OPTIMUM MOISTURE AND REQUIRES MOISTURE CONDITIONING PRIOR TO USE AS STRUCTURAL FILL SHALL NOT BE CONSIDERED AS "UNSUITABLE". NOTE ADDITIVE AND DEDUCTIVE UNIT PRICES ARE BEING PROVIDED TO HANDLE CHANGING FIELD CONDITIONS DURING CONSTRUCTION AS NEEDED.

17. DETEINERING SHALL BE SOLEY THE RESPONSIBILITY OF THE CONTRACTOR. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. PROTECT SUBGRADES FROM SETTLEMENT, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION. PREVENT SURFACE WATER RUNOFF AROUND EXCAVATED AREAS. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. DO NOT CONNECT SLOPE AS TEMPORARY DRAINAGE DITCHES. INSTALL A DETEINERING SYSTEM TO KEEP SUBGRADES DRY AND DRAIN GROUND WATER AWAY FROM EXCAVATIONS. MAINTAIN UNTIL DETEINERING IS NO LONGER REQUIRED. IF GROUNDWATER DETEINERING IS REQUIRED, CONTRACTOR IS TO OBTAIN ANY PERMITS AS MAY BE REQUIRED PRIOR TO DISCHARGE OF EFFLUENT FROM DETEINERING.

19. POND LINER SHALL BE OBTAINED FROM ON-SITE SOURCE AND SHALL BE A CLAY SOIL (UNIFIED CLASSIFICATION CH) CAPABLE OF A COMPACTED PERMEABILITY RATE OF 1×10^{-10} CM/SEC OR LESS FOR A 2' THICK LAYER OR A COMPACTED PERMEABILITY RATE OF 1.5×10^{-10} CM/SEC FOR AN 18" THICK LAYER WITH A MAXIMUM PARTICLE SIZE OF 2" AND A MINIMUM OF 80% PASSING THE #200 SIEVE. COMPACT LAYER TO A MINIMUM 98% STANDARD PROCTOR DENSITY AT 2% ABOVE OPTIMUM MOISTURE CONTENT TO 3% ABOVE OPTIMUM MOISTURE CONTENT. FOR THE CLAY LAYER TO FUNCTION AS PLANNED, IT IS NECESSARY THAT THE COMPACTED LAYER BE CONSIDERED IN SUCH A WAY THAT NO SURFACE INDENTATIONS EXIST THAT COULD CAUSE THE EFFECTIVE THICKNESS OF THE LINER TO LESS THAN THE REQUIRED. IF THE LINER IS COMPACTED WITH A SHEEPSFOOT ROLLER, OR OTHER DEVICE THAT WILL CREATE TRACKS IN THE LINER SURFACE, IT SHOULD BE OVERLAPPED SO THAT THE BOTTOM OF ANY TRACKS ARE ABOVE THE PROPOSED TOP OF THE LINER SURFACE. THE OVERLAPPED LINER SHOULD THEN BE CUT TO PLAIN DEPTH WITH A SMOOTH BLADE AND THEN FINAL SEAL, ROLLED WITH A SMOOTH ROLLER. THE IN-PLACE HYDRAULIC CONDUCTIVITY OF THE POND LINER WILL BE EVALUATED BY ASTM D5558-02 STANDARD TEST METHOD FOR INFLTRATION RATE OF SOILS BY FIELD USING DOUBLE-RING INFILTROMETER OR ASTM D5595-02 STANDARD TEST METHOD FOR FIELD MEASUREMENT OF INFILTRATION RATE USING DOUBLE-RING INFILTROMETER WITH SEALING-INNER RING. A TESTING RATE OF ONE TEST PER 10,000 SF EACH FOOT OF IN-PLACE LINER WILL BE TAKEN AND CORRELATED WITH LABORATORY PERMEABILITY TESTS TO EVALUATE THE INFILTRATION RATE OF THE IN-PLACE LINER.

20. CONTAMINATED SOILS MAY BE ENCOUNTERED WITHIN THE EXISTING SUBSTATION DECONTAMINATION LIMITS. CONTAMINATED SOILS ARE TO BE EXCAVATED AND REMOVED TO AN OFF-SITE LOCATION. THE EXISTING SUBSTATION DECONTAMINATION LIMITS ARE AS REPRESENTATIVE IS TO BE PRESENT DURING EXCAVATION OF SOIL. THE REDSTONE ARSENAL REPRESENTATIVE SHALL DETERMINE WHICH SOIL SAMPLES ARE TO BE TAKEN AND TESTED. REDSTONE ARSENAL WILL RETURN THE TEST RESULTS WITHIN 24 HOURS. THE EXTENTS OF CONTAMINATED SOIL EXCAVATION WILL BE DETERMINED BY THE REDSTONE ARSENAL REPRESENTATIVE. 

GEOTECHNICAL ENGINEER

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL STORM PIPE MATERIALS TO THE OWNER AND RECEIVE APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION.
2. ALL PROPOSED STORM INLETS (GRATES, CURB, YARD, AREA DRAINS) ARE TO BE LOCATED AT THE LOW POINTS, GRADING SHALL BE TO DIRECT RUNOFF TO THESE INLETS. NOTIFY THE OWNER OF ANY DISCREPANCIES.
3. STORM PIPE AND SYSTEMS SHALL BE CONSTRUCTED FROM CONCRETE TO UPSTREAM. VERIFY ALL PIPE SIZES, INVERTS AND POINTS OF CONNECTION PRIOR TO CONSTRUCTION. NOTIFY THE OWNER OF ANY DISCREPANCIES.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED STORM PIPE GRADES AND POINTS OF CONNECTION PRIOR TO INSTALLATION. THE OWNER SHALL BE NOTIFIED OF ANY DEVIATIONS PRIOR TO OR DURING CONSTRUCTION.
5. PROPOSED STORM PIPES SHALL BE NEEDED IN 4" OF CRUSHED AGGREGATE PER CITY OF HUNTSVILLE DR-166. STORM PIPES LOCATED IN PAVED AREAS AND 5' BEYOND THE BACK OF CURB SHALL BE BACKFILLED WITH #78 STONE UP TO SUBGRADE ELEVATION PER CITY OF HUNTSVILLE DR-166.
6. ALL RIP RAP SHALL BE CLASS 2 PER THE ALABAMA DEP. OR TRANSPORTATION (ALDOT) STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED.
7. ALL STORM PIPES 18" AND GREATER SHALL BE CLASS 3 REINFORCED CONCRETE PIPE (RCP) PER CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 527 AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS.
8. ALL STORM MANHOLES SHALL BE APPROVED CONC. RISER, AND BASE SECTIONS WITH GASKETED JOINTS MEETING ALDOT SPECIAL DRAWING H-S4621-2 OF CITY OF HUNTSVILLE RING AND COVER PER DR-126.
9. SLOPE PAVED HEADWALLS SHALL BE PER CITY OF HUNTSVILLE DR-152A THROUGH DR-152D.
10. CONCRETE BOX CULVERTS SHALL BE EITHER PRE-CAST OR CAST-IN-PLACE TYPE CONSTRUCTION. PRE-CAST BOX CULVERTS SHALL BE DESIGNED TO MEET ASHTO HS-20 LOADING REQUIREMENTS. ASHTO M273 (C350), ASHTO M259 (C383), ASHTO C1433, AND THE CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 523 FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS. CAST-IN-PLACE BOX CULVERTS SHALL BE PER THE ALDOT SPECIAL DRAWINGS PROVIDED MEETING ASHTO HS-20 LOADING CONDITIONS AND THE CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 523 FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS.
11. ALL YARD INLETS SHALL BE PRE-CAST INLET BOXES 3' x 3' x 3' or 4' x 4' x 4' depending ON MAXIMUM PIPE DEFLECTIONS, YARD INLET TOP TO BE PRECAST WITH A RING AND COVER ACCESS PROVIDED THROUGH THE TOP.
12. CONTRACTOR TO PROVIDE "RED-LINED" AS-BUILT DRAWINGS ON STORM PIPING AND STORMWATER DETENTION.

1. EXISTING EROSION CONTROL MEASURES INSTALLED IN PACKAGE 1B AND 1F. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THESE MEASURES LOCATED WITHIN THEIR WORK AREA ONLY.
2. ANY TEMPORARY ACCESS ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR RELATED TO THEIR OWN SCOPE OF WORK OR TO THE PROJECT.
3. SITE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS.
4. LVI REDLINE, LLC HAS OBTAINED A NOTICE OF REGISTRATION (NOR) FROM ADEM #A187034 (EXPIRES 3/31/2018). THE OWNER SHALL BE RESPONSIBLE FOR ALL ADEM REQUIRED MONITORING, INSPECTIONS, ETC. TO ENSURE THAT THE SITE IS AT ALL TIMES IN ACCORDANCE WITH ADEM RULES & REGULATIONS. DAILY DOCUMENTATION OF INSPECTIONS BY A Q.C.I. OR Q.C.P. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND MAINTAINED BY THE CONTRACTOR ON-SITE AND PROVIDED TO THE OWNER UPON REQUEST. ANY AND ALL FEES, FINES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING THE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
6. EROSION CONTROL DEVICES SHOWN ON THESE PLANS ARE A MINIMUM. ADDITIONAL DEVICES SHALL BE INSTALLED AS REQUIRED TO PREVENT SLITTING, EROSION, AND OTHER DEGRADATION OR POLLUTION TO THE SITE OR ADJACENT PROPERTIES, STREAMS, DITCHES, AND PUBLIC ROADWAYS.
7. EROSION CONTROL DEVICES SHALL INCLUDE, BUT NOT LIMITED TO: THE FOLLOWING DEVICES: SILT FENCING, BRUSH BERMS, SEDIMENT BASINS, DETENTION POND, STRAW WATTLES, CHECK DAMS, FILTER BERMS, JUTE MATTING, VEGETATIVE FILTER STRIPS, TURF REINFORCEMENT MAT, DIVERSION BERMS, POLYACRYLAMIDE, FLOC BLOCKS, ETC.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES IN GOOD OPERATING CONDITION DURING ALL LAND DISTURBING ACTIVITIES. THIS RESPONSIBILITY SHALL INCLUDE THE CLEANUP AND/OR REPAIRS TO THE DEVICES AT NO ADDITIONAL COST TO THE OWNER.
9. EROSION CONTROL DEVICES SHALL BE MONITORED AND MAINTAINED UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD, ANY WIND GUSTS GREATER THAN 25 MPH, AND ANY SUSTAINED WINDS GREATER THAN 20 MPH IN A 24 HOUR PERIOD.
10. AFTER ALL LAND DISTURBANCE ACTIVITIES HAVE CEASED AND AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED, THE EROSION CONTROL DEVICES SHALL BE REMOVED BY THE CONTRACTOR AND THE AREA CLEANED AND DRESSED FOR EACH CONTRACTOR'S WORK AREA. CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE ANY EROSION CONTROL MEASURES UNTIL AREA IS STABILIZED IN WORK AREA BY CONTRACTOR THAT INSTALLED THE EROSION CONTROL MEASURE.
11. DENATURING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THEIR SCOPE OF WORK. DENATURING OPERATIONS MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE OR POLLUTION TO ADJACENT PROPERTIES, STREAMS, DITCHES, OR PUBLIC ROADWAYS.
12. ALL LAND DISTURBANCE ACTIVITIES SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE EXPOSURE OF BARE AREAS AT ANY ONE TIME.
13. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN 13 DAYS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ADOT SPECIFICATIONS SECTION 682 AND 686 AND CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 663 AND 669. COORDINATE PERMANENT GRASSING WITH LANDSCAPE PLAN.
14. ALL DITCHES AND FLATLOT SIDE SLOPES SHALL RECEIVE ADOT SEED AND MULCH PER NOTE #13 ABOVE. COORDINATE WITH LANDSCAPE PLAN. ALL FLATPLOT AREAS SHALL RECEIVE WILDFLOWER MIX PER THE PROJECT SPECIFICATIONS - SUPPLEMENTAL SPECIFICATIONS LANDSCAPE 2.41F.
15. ALL GRADED AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TPOSSIL AND PERMANENT GRASSING UNLESS OTHERWISE INDICATED. PLANTING BEDS SHALL RECEIVE A MINIMUM OF 6" OF TPOSSIL.
16. PRIOR TO SITE CLEARING, ALL PERIMETER SILT FENCING, BRUSH BERMS, ETC. AND GRAVELED ACCESS DRIVES SHALL BE INSTALLED. THE OWNER WILL INSPECT AND APPROVE THE INSTALLATION OF THESE MEASURES PRIOR TO RELEASING SITE WORK CONSTRUCTION.
17. ALL EXISTING STREAMS, DITCHES, ETC. SHALL BE PROTECTED FROM SEDIMENTS AND SILTS BY SILT FENCING, WATTLES, BRUSH BERMS, ETC.
18. WATTLES OR SILT FENCING SHALL BE INSTALLED AT ALL INLETS UPON THE COMPLETION OF EACH INLET AS INSTALLED.
19. RIP RAP SHALL BE PLACED AT EACH HEADWALL, IMMEDIATELY FOLLOWING CONSTRUCTION OF EACH HEADWALL.
20. GEOTEXTILE SHALL BE PLACED ON ALL 2:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREN SC150 OR APPROVED EQUIV. UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
21. GEOTEXTILE SHALL BE PLACED ON ALL 3:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREN S150 OR APPROVED EQUIV. UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
22. GEOTEXTILE SHALL BE PLACED ON ALL DITCH BOTTOMS & TO THE TOP OF SLOPE ON EACH SIDE. GEOTEXTILE SHALL BE NORTH AMERICAN GREN SC150 OR APPROVED EQUIV. UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
23. GEOTEXTILE IS NOT REQUIRED ON 4:1 AND FLATTER SLOPES.

1. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO ANY UTILITY BEING DEMOLISHED REGARDING ITEMS TO BE SALVAGED, RECYCLED, AND REUSED. CONTRACTOR SHALL REMOVE ITEMS TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE. CONTRACTOR SHALL TURN ALL SALVAGED UTILITY ITEMS OVER TO OWNER.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL UTILITY INFRASTRUCTURE MATERIALS TO THE OWNER AND RECEIVE APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION.
3. UTILITY TRENCHES SHALL BE BACKFILLED WITH COMPACTED FILL PLACED IN 8" LOOSE LIFTS. FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR AND OPTIMUM MOISTURE CONTENT WITHIN $\pm 0.2\%$ PER CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 105 AND 110 AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS.
4. WHEN INSTALLING UTILITIES IN EXISTING AREAS, ROADWAYS, OR IN AREAS WHERE SOILS ARE CONSIDERED UNSUITABLE FOR BEDDING OR BACKFILLING, UTILITY TRENCHES SHALL BE BACKFILLED FULL DEPTH WITH #75 STONE PER CITY OF HUNTSVILLE DR-168.
5. REFER TO HUNTSVILLE UTILITIES WATER DEPARTMENT FACILITIES SPECIFICATIONS DATED 2008 FOR ALL WATER SYSTEMS. HUNTSVILLE UTILITIES WATER MAIN SHALL HAVE HUNTSVILLE UTILITIES MARKER TAPE INSTALLED 2' ABOVE THE PIPE AND THE REDSTONE ARSENAL WATER MAIN RELOCATION SHALL HAVE REDSTONE MARKER TAPE INSTALLED 2' ABOVE THE PIPE. THESE WATER MAINS SHALL HAVE A MINIMUM OF 5' C.T.C. SEPARATION.
6. REFER TO HUNTSVILLE UTILITIES ELECTRICAL DEPARTMENT GENERAL SPECIFICATIONS FOR INSTALLATION OF UNDERGROUND UTILITIES DATED OCTOBER 2008 FOR ALL ELECTRICAL SYSTEMS.
7. WHEN INSTALLING UTILITIES, CONTRACTOR IS REQUIRED TO COORDINATE WITH HUNTSVILLE UTILITIES ON THE GAS INSTALLATION WORK AND SCHEDULE ALONG REDSTONE GATEWAY.
8. THE CONTRACTOR SHALL CONTACT TRENCH HUNT WITH HUNTSVILLE UTILITIES POWER AT (256) 535-1306 OR (256) 653-8620 24 HOURS PRIOR TO THE CONSTRUCTION OF THE ELECTRICAL PRIMARY TO SET UP AN ON-SITE JOE MEETING. STREET LIGHT INFRASTRUCTURE WILL BE INSPECTED BY THE OWNER'S PROJECT MANAGER.

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PROJECT CONTROL POINTS (NE)					
NAME	GRID NORTH	GRID EAST	ELEVATION	DESCRIPTION	LOCATION
AHD-16	1,530,461.19	404,038.30	655.94	ALDOT HIGHWAY MONUMENT NO. 17	I-565 R.O.W. 275' WEST OF CL RIDEOUT ROAD
AHD-17	1,530,739.43	403,720.37	662.68	ALDOT HIGHWAY MONUMENT NO. 16	I-565 R.O.W. 600' WEST OF CL RIDEOUT ROAD
TP-1	1,528,778.40	404,155.65	638.64	MAG NAIL & GALVANIZED SHINER	177' NORTH OF CL GOSS ROAD & 113' WEST OF CL RIDEOUT ROAD
TP-2	1,529,198.25	404,178.52	640.82	MAG NAIL & GALVANIZED SHINER	600' NORTH OF CL GOSS ROAD & 113' WEST OF CL RIDEOUT ROAD



N.T.S.



* ANTI-SEEP COLLAR TO BE KEYED INTO CONCRETE BOX CULVERTS



N.T.S.



KEEP COLLAR



DETAILS

**REDSTONE GATEWAY - PACKAGE I
LAKE F
CITY OF HUNTSVILLE
HUNTSVILLE, ALABAMA**

[illegible]

C7.2-R1



